



(51) International Patent Classification:

B65D 85/10 (2006.01) *B65D 5/50* (2006.01)
B65D 5/66 (2006.01)

(21) International Application Number:

PCT/EP2015/068619

(22) International Filing Date:

13 August 2015 (13.08.2015)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

14181087.9 14 August 2014 (14.08.2014) EP

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trasse 17, 81925 München (DE).(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,

DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

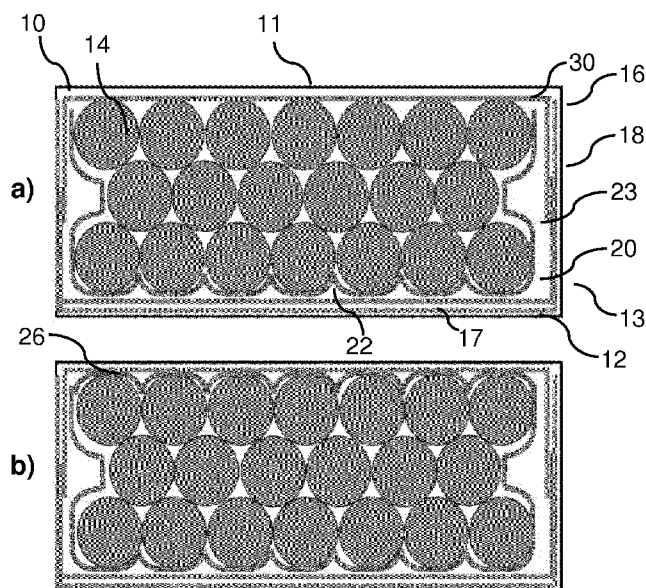
- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

Published:

- with international search report (Art. 21(3))

(54) Title: CONTAINER FOR CONSUMER ARTICLES WITH INNER STRUCTURE

Figure 1



(57) Abstract: A container for consumer articles comprises a box portion (10) comprising a front wall (11), a rear wall (12) and two side walls (13) extending between the front wall and the rear wall. The inner surface of the container is provided with a cell structure (20) for holding the consumer articles at a stable position relative to the inner surface of the container. The consumer articles are cylindrical structures having a predefined radius and the cell structure provided at the inner surface of the container comprises curved portions having a radius which corresponds to the radius of the consumer articles. The invention is further directed to a method for forming a corresponding container.

CONTAINER FOR CONSUMER ARTICLES WITH INNER STRUCTURE

The present invention relates to a novel container for housing consumer articles. The containers of the present invention find particular application as containers for elongate consumer articles.

It is known to package consumer articles in containers formed from folded laminar blanks. For example, elongate consumer articles such as cigarettes and cigars are commonly sold in rigid box shaped containers. These containers can be hinged lid containers having a box portion with a lid connected to the box about a hinge line extending across the rear wall of the container. In use, the lid is pivoted about the hinge line to open the pack and provide access to the smoking articles held in the box. In some cases, the container further includes an inner frame partly wrapped around the consumer articles. This may provide further rigidity to the container as well as protect the consumer articles. In cases where the inner frame extends above an upper edge of the box portion, the inner frame typically also provides a surface against which the lid can close.

During use and over time, a container is progressively emptied of consumer articles. The articles remaining in the container are no longer held in position as firmly as in the unopened container. Therefore, the consumer articles which remain after others are progressively emptied from the container may become free to move around and may easily be shaken during transport of the container. In the case of cigarettes, this may cause some loose tobacco material to fall out of the tobacco rods.

Further, there is a need to provide containers with an internal volume that is bigger in size than the volume occupied by the consumer articles they hold. This excess internal volume may result in articles being displaced or shaken within the container during transport of the unopened container. The consumer articles are free to move around and may easily be shaken during transport of the container. In the case of cigarettes, this may cause some loose tobacco material to fall out the tobacco rods or the breakage of some cigarettes.

It would be desirable to provide an improved container for consumer articles such that the consumer articles are effectively held within a given portion of the internal volume of the container at least until the container is emptied of a certain percentage of its original content.

US 2015/027916 discloses a hinge lid container for cigarettes in which the cigarettes are comprised within an unstructured inner collar. The collation of cigarettes and the inner collar are enclosed and sealed in an inner liner. The inner liner has a resealable opening through which the cigarettes can be removed from the container.

WO 98/49072 discloses a container for cigarettes in which the cigarettes are comprised within an unstructured inner sleeve and are subsequently sealed in an inner liner

in order to prevent the cigarettes from drying out before use. A plurality of sealed collations of cigarettes may be provided to a single container.

US 6,164,444 discloses a cigarette container in which a collation of cigarettes is held in an substantially unstructured inner frame and is wrapped by a sealing layer of an inner
5 liner. The inner liner has an opening that is resaelably closed by a cover with permanently tacky surface.

US 5,992,621 discloses a multi-compartment cigarette container in which each compartment is sized to receive exactly one cigarette. The compartments are made from non-combustible material. After smoking the cigarette butts can be inserted into a
10 compartment. The compartments are formed such that a burning cigarette butt is extinguished after insertion into a compartment.

According to a first aspect of the invention there is provided a container for consumer articles, wherein the consumer articles are cylindrical structures having a predefined radius. The container comprises a box portion comprising a front wall, a rear wall and two side walls
15 extending between the front wall and the rear wall of the box portion of the container. At an inner surface of the container a cell structure is provided for holding the consumer articles at a stable position relative to the inner surface of the container. The cell structure provided at the inner surface of the container comprises curved portions having a radius which corresponds to the radius of the consumer articles.

The terms "front", "rear", "upper", "lower", "above", "below", "side", "lateral", "top",
20 "bottom" and other terms used to describe relative positions of the components of containers according to the invention refer to the container in an upright position with an open end of the box portion at the top and the consumer goods accessible from the upper end at the front. The terms "side" and "lateral" are used with reference to side walls of the container when the
25 container is viewed from the front in its upright position.

The expression "at least partly enclosing a group of consumer articles" is used throughout this specification to mean that an element of the container, for example the receiving portion of the inner frame, extends across at least three sides of the group of consumer articles. By way of example, a number of consumer articles may be collated in a
30 group having a substantially parallelepiped shape and the receiving portion is wrapped around the front and sides of the group.

The term "stable position" as used throughout this specification is used to describe a condition wherein, during regular use or shipping of the container according to the invention, a consumer article is confined substantially firmly in a predetermined position with respect to
35 the container. Holding the consumer articles at a "stable position" further means that the

consumer articles are prevented from being displaced during normal handling or transport of the unopened container.

It shall be understood that, in addition, an element of the container may enclose the group of consumer articles over only a part of their length. For example, the receiving portion of the inner frame may enclose only three sides of a bottom section of the group of consumer articles. Of these three sides, at least two are substantially parallel to each other, for example the three sides may be defined by a front wall and two side walls.

The term "curved" used in this specification refers to any line which is not straight. In a container according to the invention, the additional element is shaped such as to conveniently at least partially wrap around a number of consumer articles such that the overall volume occupied by the consumer articles is smaller than the whole internal volume available inside the box portion. Advantageously, even in containers only partially filled with consumer articles, regardless of whether this is due to the progressive removal of consumer articles from the container or to production requirements or other constraints, random movement of the consumer articles within the box portion during transportation of the container is significantly reduced, if not eliminated altogether.

The container of the present invention comprises an inner surface having a "cell structure" for holding the consumer articles at a stable position relative to the inner surface of the container. In this regard, the term "cell structure" is directed to any surface that is suitable to hold the consumer articles at a stable position. In order to hold the consumer articles at a stable position the cell structure of the inner surface of the container is formed, for example, to wrap the consumer articles or to create localized overpressure onto the consumer articles.

Preferably, the cell structure provided at the inner surface of the container corresponds at least partially to the outer contours of a collation of consumer articles to be packed within the container. Advantageously the cell structure is formed such that it provides recesses having dimensions to accommodate individual consumer articles.

The curved portions of the cell structure might form a corrugation of the inner surface of the container. The cell structure or the corrugations, respectively, might be provided at individual sides of the inner surface. Preferably the cell structure is provided along the full length of at least one side of the inner surface of the container. Further preferably the cell structure is provided along the full length of all sides of the inner surface of the container. Further preferably the cell structure is provided along more than 30 percent, more than 50 percent or more than 75 percent of the full length of all sides of the inner surface of the container.

The cell structure may also comprise straight portions and having the form of a chevron pattern or any desired polygonal pattern. The cell structure may also consist of a combination of straight and curved portions.

Preferably the container includes an inner frame and the cell structure is provided at
5 the inner surface of the inner frame. Inner frames are use in containers, in particular in cigarette containers, for increasing rigidity of the container. By providing the cell structure at the inner surface of the inner frame, the inner frame additionally assists in holding the consumer articles at a stable position within the container.

The container of the present invention may also include an inner liner. Inner liners are
10 usually used in cigarette packaging in order to hold a collation of articles at a desired shape while the cigarette container is formed around this collation of articles from a container blank. According to a further aspect of the invention, the inner surface of the inner liner may be provided with the cell structure. An advantage of providing the inner liner with a cell structure is that the remaining structures of the container, like the box portion of the container and the
15 inner frame, can be produced according to conventional manufacturing methods using already existing manufacturing equipment. Only the manufacturing equipment for producing the inner liner has to be modified in order to provide the inner liner with the cell structure according to the invention.

The inner liner can be made from elastic material such that the cigarettes are also
20 held at a stable position when the consumer articles are progressively removed from the container. In order to limit the spring effect, the inner liner may also be creased.

According to a further aspect of the invention, the container may include a tray for holding a collation of consumer articles and the cell structure is provided at the inner surface of the tray. A tray is a removable element provided within the container and which is formed
25 such as to assist in holding and removing consumer articles from a packaging container.

Preferably the tray comprises at least three side walls and the cell structure is provided at the inner surface of at least one of these side walls. Further preferably the tray comprises a tray rear wall and two lateral tray side walls. Additionally a tray bottom wall can be provided in order to increase stability of the tray. Because the tray only covers three of the
30 four side faces of the collation of consumer articles, the consumer articles can be filled into the tray relatively easy. The drawback of this embodiment is however, that the retaining force holding the consumer articles in a stable position is limited.

In order to increase the retaining force, the tray element may be additionally wrapped in an inner liner. The inner liner may be wrapped around the tray completely, i.e. the inner
35 liner is wrapped at least around the four side walls of the inner tray. Alternatively an inner liner may be provided which only covers the side wall, which is not covered by the tray. For

example, if the tray comprises a tray rear wall and two lateral tray side walls, the inner liner may extend between the free ends of the lateral tray side walls and form a tray front wall. The inner liner may be fixed to the lateral tray side walls by any suitable means like adhesives or by bonding.

5 Advantageously the inner tray may also be provided with four sidewalls so as to completely wrap the collation of consumer articles. The stability of an inner tray encompassing the consumer articles completely is increased.

The tray can be formed from any suitable material including paper, cardboard, plastic, thermoformed plastic or molded plastic material.

10 The container of the present invention may further comprises an inner frame for increasing stability of the container, the further inner frame being provided between the container walls and the inner liner or the tray.

In a further aspect of the invention, the cell structure is provided by an inner liner or an inner frame which are wrapped completely around the collation of consumer articles. In order to hold the consumer articles at a stable position the inner surfaces of either of these elements is not necessarily structured. The inner liner or the inner frame can also be wrapped tightly around the consumer articles so as to create localized overpressure onto the consumer articles. The main advantage of this embodiment is that the existing production machinery can basically be used also for the production of this novel container. The only required modification is directed to means for facilitating tight wrapping of the inner liner or inner frame around the collation of consumer articles and for making sure that the inner liner or inner frame stays tightly wrapped around the collation of consumer article. To this end the inner liner or inner frame may have overlapping ends which are fixed to each other by adhesive or similar well known means.

25 The present invention is also directed to a process for preparing a container for consumer articles, the process comprises the steps of forming a collation of consumer articles, placing the collation of consumer articles onto a blank, folding the blank around the collation of consumer articles to obtain the container wherein the inner surface of the container is provided with a cell structure for holding the consumer articles at a stable position relative to the inner surface of the container.

30 Preferably, the collation of consumer articles is placed on a tray, and the tray is then placed on the container blank. In this embodiment the cell structure is provided at the inner surface of the tray.

The tray holding the collation of consumer articles additionally may be at least partially wrapped with an inner liner, wherein the dimensions of the tray or the inner liner are sized such that they exert a slight overpressure to the consumer articles.

In some embodiments, by virtue of the geometry of the inner frame and of the natural elasticity of the materials, during use the container can adaptively hold a progressively smaller number of consumer articles while the container is emptied at least until its content in consumer articles is reduced by for example 5 percent, preferably by 10 percent and more preferably by 20 percent.

In any of the embodiments described above, the container is preferably filled with elongate smoking articles, such as, for example, cigarettes, cigars or cigarillos. It will be appreciated that through appropriate choices of the dimensions, containers according to the invention may be designed for different numbers of conventional size, king size, super-king size, slim or super-slim cigarettes. However, containers in accordance with the present invention can also be used with a variety of consumer goods other than smoking articles.

Containers in accordance with the present invention may be of a hinged lid design such that the container comprises a lid pivotable along a hinge line, between a closed position and an open position in which consumer goods can be removed from the container. In these embodiments, the hinge lid may be pivotable along a hinge line extending across the rear wall of the box portion, such that the lid also includes a portion of the rear wall.

As well as hinged lid containers, the skilled person will appreciate that the present invention can be applied to containers of alternative design, such as soft packs, that is containers comprising a box portion constructed from a laminar blank made of a thinner, more easily deformable material, such as, for example, paper. Further, the present invention may be conveniently applied to containers having a sliding mechanism for opening the container.

Containers according to the invention will typically be assembled in the conventional way, by folding one or more laminar blanks around the consumer goods and sealing overlying panels of the laminar blanks together in order to retain the container in the assembled shape. This may be achieved using conventional glues or adhesives.

Containers according to the invention may comprise box portions in the shape of a rectangular parallelepiped, with right-angled longitudinal and right-angled transverse edges. Alternatively, the box portion may comprise one or more rounded longitudinal edges, rounded transverse edges, bevelled longitudinal edges or bevelled transverse edges, or combinations thereof. For example, the container according to the invention may comprise, without limitation:

- one or two longitudinal rounded or bevelled edges on the front wall, and/or one or two longitudinal rounded or bevelled edges on the back wall.

- one or two transverse rounded or bevelled edges on the front wall, and/or one or two transverse rounded or bevelled edges on the back wall.

- one longitudinal rounded edge and one longitudinal bevelled edge on the front wall, and/or one transverse rounded edge and one transverse bevelled edge on the back wall.

- one or two transverse rounded or bevelled edges on the front wall and one or two longitudinal rounded or bevelled edges on the front wall.

5 - two longitudinal rounded or bevelled edges on a first side wall or two transverse rounded or bevelled edges on the second side wall.

Where the container comprises one or more rounded edges and is made from one or more laminar blanks, preferably the blanks comprise three, four, five, six or seven scoring lines or creasing lines to form each rounded edge in the assembled container. The scoring
10 lines or creasing lines may be either on the inside of the container or on the outside of the container. Preferably, the scoring lines or creasing lines are spaced from each other by between about 0.3 millimeters and 4 millimeters.

Preferably, the spacing of the creasing lines or scoring lines is a function of the thickness of the laminar blank. Preferably, the spacing between the creasing lines or scoring
15 lines is between about 0.5 and about 4 times larger than the thickness of the laminar blank.

Where the box portion of the container comprises one or more bevelled edge, preferably the bevelled edge has a width of between about 1 millimeters and about 10 millimeters, preferably between about 2 and about 6 millimeters. Alternatively, the container may comprise a double bevel formed by three parallel creasing or scoring lines that are
20 spaced such that two distinct bevels are formed on the edge of the container.

Where the box portion of the container comprises a bevelled edge and is made from one or more laminar blanks, the bevel may be formed by two parallel creasing lines or scoring lines in the laminar blank. The creasing lines or scoring lines may be arranged symmetrically to the edge between a first wall and a second wall. Alternatively, the creasing
25 lines or scoring lines may be arranged asymmetrically to the edge between the first wall and the second wall, such that the bevel reaches further into the first wall of the container than into the second wall of the container.

Through an appropriate choice of the dimensions of the box portion, containers according to the invention may be designed to hold different total numbers of smoking
30 articles, or different arrangements of smoking articles. For example, through an appropriate choice of the dimensions thereof, containers according to the invention may be designed to hold a total of between ten and twenty smoking articles.

The smoking articles in the container may be arranged in different collations, depending on the total number of smoking articles. For example, the smoking articles may be
35 arranged in a single row of six, seven, eight, nine or ten. Alternatively, the smoking articles may be arranged in two or more rows. The two or more rows may contain the same number

of smoking articles. For example, the smoking articles may be arranged in: two rows of five, six, seven, eight, nine or ten; three rows of five or seven; or four rows of four, five or six. Alternatively, the two or more rows may include at least two rows containing different number of smoking articles to each other. For example, the smoking articles may be arranged in:

5 a row of five and a row of six (5-6); a row of six and a row of seven (6-7); a row of seven and a row of eight (7-8); a middle row of five and two outer rows of six (6-5-6); a middle row of five and two outer rows of seven (7-5-7); a middle row of six and two outer rows of five (5-6-5); a middle row of six and two outer rows of seven (7-6-7); a middle row of seven and two outer rows of six (6-7-6); a middle row of nine and two outer rows of eight (8-9-8); or a middle row

10 of six with one outer row of five and one outer row of seven (5-6-7).

Containers according to the present invention may hold smoking articles of the same type or brand, or of different types or brands. In addition, both filterless smoking articles and smoking articles with various filter tips may be contained, as well as smoking articles of differing length (for example, between about 40 millimeters and about 180 millimeters),

15 diameter (for example, between about 4 millimeters and about 9 millimeters). In addition, the smoking articles may differ in strength of taste, resistance to draw and total particulate matter delivery.

The length, width and depth of containers according to the invention may be such that, in the closed position, the resultant overall dimensions of the container are similar to the

20 dimensions of a typical disposable hinge-lid pack of twenty cigarettes.

Preferably, containers according to the invention have a height of between about 60 millimeters and about 150 millimeters, more preferably a height of between about 70 millimeters and about 125 millimeters, wherein the height is measured from the top wall to the bottom wall of the container.

Preferably, containers according to the invention have a width of between about 12 millimeters and about 150 millimeters, more preferably a width of between about 70 millimeters and about 125 millimeters, wherein the width is measured from one side wall to the other side wall of the container.

Preferably, containers according to the invention have a depth of between about 6

30 millimeters and about 100 millimeters, more preferably a depth of between about 12 millimeters and about 25 millimeters wherein the depth is measured from the front wall to the back wall of the container (comprising the hinge between box and lid).

Preferably, the ratio of the height of the container to the depth of the container is in between about 0.3 to 1 and about 10 to 1, more preferably between about 2 to 1 and about 8

35 to 1, most preferably between about 3 to 1 and 5 to 1.

Preferably, the ratio of the width of the container to the depth of the container is between about 0.3 to 1 and about 10 to 1, more preferably between about 2 to 1 and about 8 to 1, most preferably between about 2 to 1 and 3 to 1.

Containers according to the invention may be shrink-wrapped or otherwise over
5 wrapped with a transparent polymeric film of, for example, high or low density polyethylene, polypropylene, oriented polypropylene, polyvinylidene chloride, cellulose film, or combinations thereof in a conventional manner. Where containers according to the invention are over wrapped, the over wrapper may include one or more tear tapes. In addition, the over wrapper may be printed with images, consumer information or other data. The additional
10 outer wrapper may advantageously protect the surface of the container for example against abrasion during handling.

As well as housing a group of smoking articles, the container may further comprise other consumer goods, for example matches, lighters, extinguishing means, breath-fresheners or electronics. The other consumer goods may be attached to the outside of the
15 container, contained within the container along with the smoking articles, in a separate compartment of the container or combinations thereof.

The exterior surfaces of containers according to the invention may be printed, embossed, debossed or otherwise embellished with manufacturer or brand logos, trademarks, slogans and other consumer information and indicia.

20 The invention will be further described, by way of example only, with reference to the accompanying drawings in which:

Figure 1 shows cross sectional views of a container according to the present invention comprising an inner frame, an inner liner and an inner tray having cell structure,
25 wherein the structured tray encloses the consumer articles a) partially and b) completely;

Figure 2 shows cross sectional views of a container according to the present invention wherein a) the tray is combined with the inner liner for wrapping the consumer articles and wherein b) the structured tray encloses the consumer articles completely and is
30 provided in the container without any further elements;

The container shown in Figure 1a is shaped as a rectangular parallelepiped and comprises a box portion 10. The box portion 10 comprises a front wall 11, a rear wall 12, and two lateral side walls 13 extending between the front wall 11 and the rear wall 12. The
35 upper side of the box 10 is open to provide an upper opening through which consumer

articles can be removed. The container shown in Figure 1a is a cigarette container, designed for holding 20 cigarettes 14.

The container further comprises an inner frame 16, having an inner frame rear wall 17 and two lateral inner frame side walls 18. The inner frame 16 supports the container box portion 10 and provides additional rigidity to the container.

The container of Figure 1a further comprises a collation of cigarettes 14, which are held by a tray 20. The tray 20 comprises a tray rear wall 22 and two lateral tray side walls 23. The surface of the tray walls 22, 23 comprises curved portions such that the inner surface of the tray 20 corresponds at least partially to the outer contours of the collation of cigarettes 14 packed within the container. The structured surface of the tray 20 provides a cell structure such that the cigarettes 14 are held at a stable position.

In order to prevent the cigarettes 14 from falling out of the tray 20 during packaging, and in order to increase the overall stability of the collation of cigarettes 14, an inner liner 30 is provided which is wrapped around the tray 20 holding the collation of cigarettes 14.

In Figure 1b, a further alternative of the container of the present invention is depicted in which the tray 20 is further provided with a structured tray front wall 26 such that the tray 20 encompasses the collation of cigarettes 14 on all four sides. The tray 20 of Figure 1b provides increased stability compared to the tray of Figure 1a.

In Figure 2 further alternative embodiments of the present invention are shown. The container shown in Figure 2b also comprises a box portion 10 having a front wall 11, a rear wall 12, and two lateral side walls 13 extending between the front wall 11 and the rear wall 12. The container comprises a tray 20 comprising a tray rear wall 22 and two lateral tray side walls 23. The tray 20 is again suitable to hold 20 cigarettes 14. In contrast to the previously described embodiment, the container of Figure 2a does not comprise an inner frame. Thus, when placed in the container, tray 20 is directly adjacent to the walls 12, 13 of the box portion 10 of the container. In order to increase stability of the tray 20 and in order to assist in holding the cigarettes 14 in a stable position within the container, an inner liner 30 is provided which extends between the free ends 28 of the lateral tray side walls 23. At its lateral ends the inner liner 30 is adhered to the free ends 28 of the lateral tray side walls 23, such that the inner liner 30 basically forms a front wall of the tray 20.

The embodiment shown in Figure 2c depicts a cigarette container comprising a tray 20 that corresponds to the tray 20 comprised in the embodiment shown in Figure 1b. The tray 20 comprises structured tray side walls 22, 23, 26 which completely encompass the collation of cigarettes 14, and provide a cell structure which is suitable to maintain the cigarettes 14 in a stable position within the container. The container of Figure 2c does not

comprise an inner frame or an inner liner. Accordingly manufacturing of the container of Figure 2b is less complex than manufacturing of the containers shown in Figures 1a and 1b.

The container shown in Figure 2a also comprises a box portion 10 having a front wall 11, a rear wall 12, and two lateral side walls 13 extending between the front wall 11 and the rear wall 12. The container further comprises an inner frame 16, having an inner frame rear wall 17 and two lateral inner frame side walls 18. The collation of cigarettes is held by an inner liner 30, having an inner liner front wall 31, an inner liner rear wall 32 and overlapping lateral inner liner side walls 33. The inner liner 30 is tightly wrapped around the collation of cigarettes and thereby holds the collation of cigarettes in a stable position. The inner liner 30 can made from elastic material such as to exert a slight overpressure to the collation of cigarettes. In this way the remaining cigarettes are even held at a stable position while the cigarettes are progressively removed from the container.

CLAIMS

1. A container for consumer articles, the container comprising:
a box portion comprising a front wall, a rear wall and two side walls extending
5 between the front wall and the rear wall of the box portion;
wherein an inner surface of the container is provided with a cell structure for holding
the consumer articles at a stable position relative to the inner surface of the container,
wherein the consumer articles are cylindrical structures having a predefined
radius, and
10 wherein the cell structure provided at the inner surface of the container comprises
curved portions having a radius which corresponds to the radius of the consumer articles.
2. A container according to claim 1, wherein the cell structure provided at the
inner surface of the container corresponds at least partially to the outer contours of a
15 collation of consumer articles to be packed within the container.
3. A container according to one of the previous claims, wherein the container
includes an inner frame and the cell structure is provided by the inner frame.
- 20 4. A container according to one of the previous claims, wherein the container
includes an inner liner and the cell structure is provided by the inner liner.
5. A container according to one of the previous claims, wherein the container
includes a tray for holding a collation of consumer articles and the cell structure is provided
25 by the inner surface of the tray.
6. A container according to claim 5, wherein the tray comprises at least three
side walls.
- 30 7. A container according to claim 5, wherein the tray encloses the collation of
consumer articles completely.
8. A container according to any one of claims 5 to 7, wherein the tray is formed
from paper, cardboard, plastic, thermoformed plastic or molded plastic material.

9. A container according to any one of claims 5 to 8, wherein the container further comprises an inner liner wrapped at least partially around the tray holding the consumer articles.

5 10. A container according to any one of claims 5 to 9, wherein the container further comprises an inner frame for increasing stability of the container, the further inner frame being provided between the container walls and the inner liner.

10 11. A container according to any of the preceding claims, wherein the consumer articles are smoking articles.

12. A method for preparing a container for consumer articles, comprising the steps of:

- 15 (a) forming a collation of consumer articles, wherein the consumer articles are cylindrical structures having a predefined radius,
- (b) placing the collation of consumer articles onto a blank,
- (c) folding the blank around the collation of consumer articles to obtain the container

20 wherein the inner surface of the container is provided with a cell structure for holding the consumer articles at a stable position relative to the inner surface of the container and

wherein the cell structure provided at the inner surface of the container comprises curved portions having a radius which corresponds to the radius of the consumer articles.

25 13. A method according to claim 12, wherein the collation of consumer articles is placed on a tray, wherein the cell structure is provided by the inner surface of the tray.

30 14. A method according to claim 12 or 13, wherein the tray holding the collation of consumer articles additionally is at least partially wrapped with an inner liner, wherein the dimensions of the tray or the inner liner are sized such that they exert a slight overpressure to the consumer articles.

Figure 1

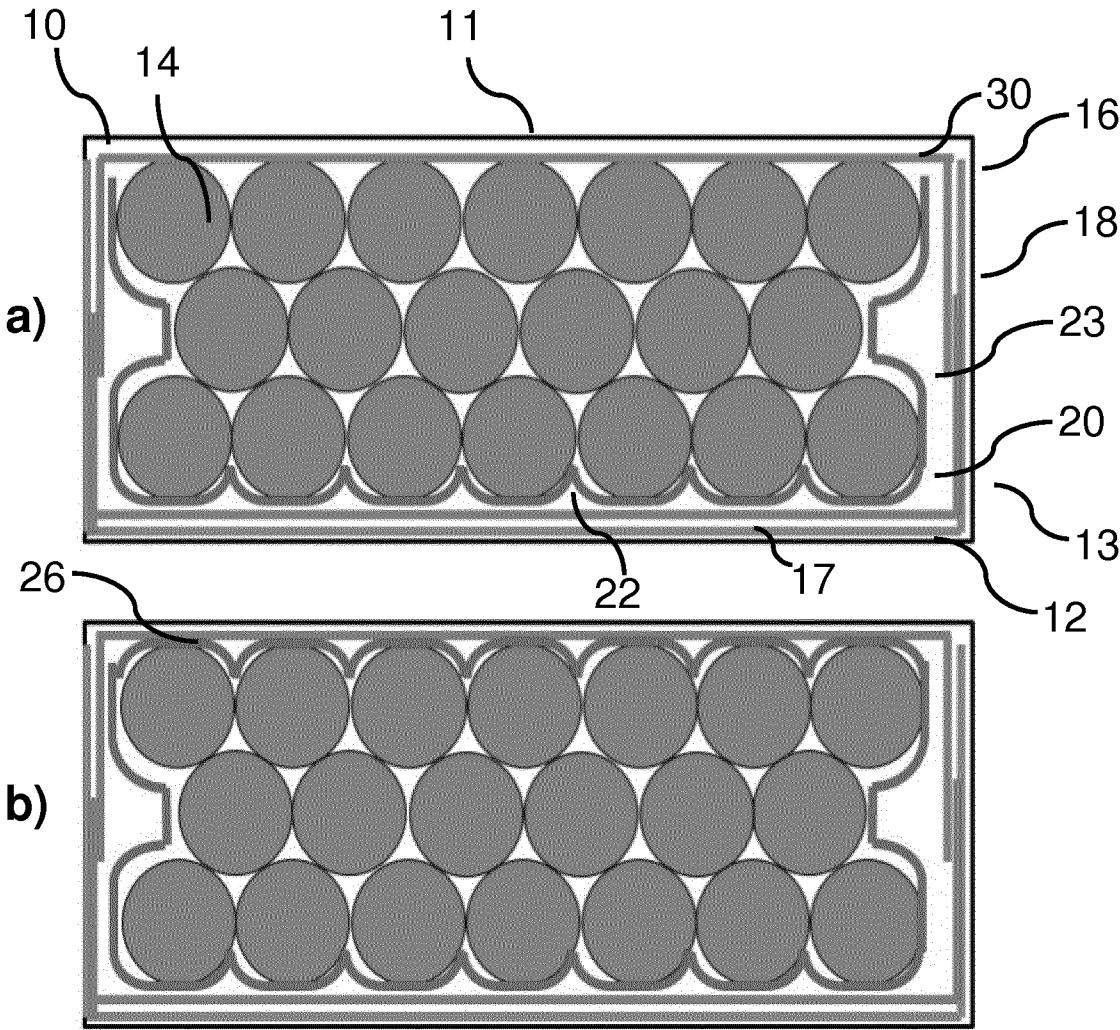
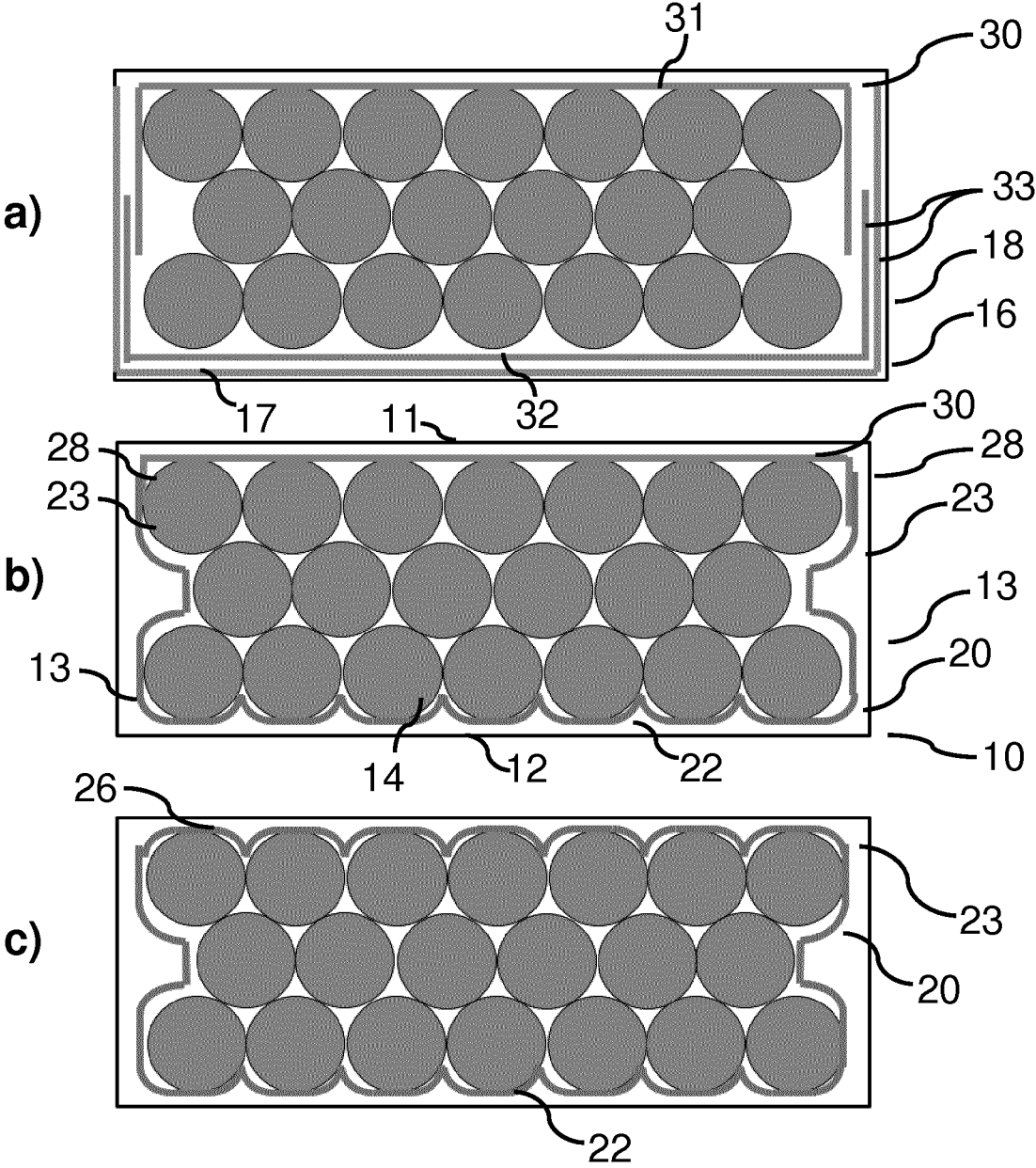


Figure 2



INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2015/068619

A. CLASSIFICATION OF SUBJECT MATTER
INV. B65D85/10 B65D5/66 B65D5/50
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Y	column 3, line 8 - column 4, line 27; figures 1-4	12-14
Y	----- DE 10 2011 119344 A1 (FOCKE & CO [DE]) 11 April 2013 (2013-04-11) paragraph [0032] - paragraph [0050]; figures 1-10	12-14
A	----- WO 98/49072 A1 (ROTHMANS BENSON & HEDGES [CA]; KEAVENEY BENEDICT [CA]; DAVIDSON KENNET) 5 November 1998 (1998-11-05) page 10, line 9 - page 13, line 7; figures 10-17 ----- -/-	1,9-11



Further documents are listed in the continuation of Box C.



See patent family annex.

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Date of the actual completion of the international search

13 October 2015

Date of mailing of the international search report

22/10/2015

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INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2015/068619

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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